

## CLAIMS

- 1 An acquisition and control system for use with devices installed in an underground well, comprising:
  - an installation designer;
  - a data server including a database of device-specific and installation-specific data;
  - an application builder; and
  - a control and acquisition system;wherein
  - the installation designer comprises a system for defining a hardware and software functional configuration for the devices installed in the well, the functional configuration being provided to the data server;
  - the application builder comprises a system for obtaining software components from the data server and configuring such components to correspond to the functional configuration defined by the installation builder, the application builder outputting the configured software components to the control and acquisition system; and
  - the control and acquisition system installs the configured software components in a data communication and processing environment connected to the devices installed in the well so as to control operation of the devices and to acquire data from the devices in accordance with the functional configuration.
- 2 A system as claimed in claim 1, wherein the installation designer defines the hardware and software configuration in the form of software modules based on data obtained from the database.
- 3 A system as claimed in claim 2, wherein the installation designer adds, modifies or deletes the modules.
- 4 A system as claimed in claim 2 or 3, wherein the application builder selects software resources from the database to fulfill the functional requirements of each module.

- 5 A system as claimed in any preceding claim, wherein the installation designer and application builder operate at a location remote from the well site.
- 6 A system as claimed in claim 5, wherein the output from the application designer is provided for installation at the well site.